

L Number	Hits	Search Text	DB	Time stamp
1	8	("5220260" "5414337" "5559412" "5889670").pn.	USPAT; US-PGPUB; DERWENT	2003/09/30 14:04
2	4	("5220260" "5414337" "5559412" "5889670").pn.	USPAT	2003/09/30 14:03
3	1	6,154,201.pn.	USPAT	2003/09/30 13:27
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5	39	(("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator	USPAT	2003/09/30 13:44
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6	28	((("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator) and controller	USPAT	2003/09/30 13:44
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7	28	(((("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator) and controller) and computer	USPAT	2003/09/30 13:44
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8	21	(((("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator) and controller) and computer) and (table memory)	USPAT	2003/09/30 13:45
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9	18	(((("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator) and controller) and computer) and (table memory)) and sensor	USPAT	2003/09/30 13:45
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10	17	(((((("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator) and controller) and computer) and (table memory)) and sensor) and feedback	USPAT	2003/09/30 13:46
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11	34	((("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator) and feedback	USPAT	2003/09/30 13:47
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12	33	(((("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and actuator) and feedback) and computer ("5220260" "5414337" "5559412" "5889670").pn.) and computer	USPAT	2003/09/30 13:47
13	4	("5220260" "5414337" "5559412" "5889670").pn.) and computer	USPAT	2003/09/30 14:04

14	88	(("3919691"   "4050265"   "4131033"   "4477043"   "4560983"   "4706294"   "4712101"   "4782327"   "4795296"   "4800721"   "4823634"   "4868549"   "4935728"   "4943866"   "4964004"   "4979050"   "4983901"   "5007300"   "5044956"   "5095303"   "5107080"   "5138154"   "5139261"   "5146566"   "5185561"   "5186629"   "5189355"   "5193963"   "5204600"   "5220260"   "5223776"   "5235868"   "5254919"   "5280276"   "5296846"   "5296871"   "5313230"   "5317336"   "5355148"   "5374942"   "5381080"   "5389865"   "5396266"   "5398044"   "5405152"   "5414337"   "5457479"   "5473344"   "5477237"   "5491477"   "5513100"   "5530455"   "5541379"   "5542672"   "5543821"   "5576727"   "5589828"   "5589854"   "5591082"   "5623582"   "5625576"   "5627531"   "5642469"   "5643087"   "5656901"   "5666138"   "5666473"   "5691747"   "5691898"   "5709219"   "5712725"   "5714978"   "5721566"   "5724068"   "5724106"   "5734373"   "5736978"   "5742278"   "5745057"   "5749577"   "5754023"   "5755577"   "5760764"   "5767839"   "5781172"   "5787152"   "5790108"   "5805140"   "5808568"   "5808603"   "5823876"   "5825308"   "5831408"   "5841428"   "5889506"   "5889670"   "5889672"   "5912661"   "5944151"   "5959613"   "5990869").PN.) and computer 5220260.pn.	USPAT	2003/09/30 14:04
-	2		USPAT; US-PPGPUB; DERWENT	2003/09/30 11:09

18. A movable member; an actuator coupled to the moveable member, the motor being configured to output a haptic feedback, the haptic feedback including a modulating force; a data storage component configured to store torque data associated with the haptic feedback, the torque data being provided by a host computer; a sensor coupled to the moveable member, the sensor being configured to send position information associated with a position of the moveable member and a local controller coupled to the data storage component and the actuator, the controller being configured to be in communication with the house computer, the controller being configured to send a control signal to the actuator, the control signal being based on data values associated with a host software application of the host computer, the haptic feedback being associated with the position information, and the host software application.

19. The device of claim 19, the actuator being a first actuator, the device further comprising a second actuator, the controller being configured to output the control signal to the first and second actuators, the first and second actuators configured to produce the haptic feedback.

20. The device of claim 19, wherein the data storage component is configured to receive and store a plurality of torque values from the host computer.

21. The device of claim 21, wherein each of the torque values is associated with a different tactile sensation.